UTS UNIVERSITY OF TECHNOLOGY SYDNEY

Dynamic states and spinning plates: Microfoundations of balancing tensions

by Peter Graham

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under the supervision of Professor Emmanuel Josserand, Associate Professor Natalia Nikolova and Dr Marco Berti

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Certificate of original authorship

I, Peter Graham, declare that this thesis, is submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the Business School at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

This document has not been submitted for qualifications at any other academic institution.

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Signature: Production Note:
Signature removed prior to publication.

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Acknowledgements

Undertaking a PhD has been an immensely challenging journey that has changed how I think and feel. Coming from my undergraduate studies, it has taken me by surprise how different an experience a PhD is. Where in the past, my academic goals might stretch out a year ahead of me at most, striving towards a single goal for almost four years has seen a great breadth of good and bad experiences subsumed as part of my PhD. A PhD is so much more than a manuscript and I cannot help but have mixed feelings about the journey.

Since commencing my candidature I have moved out and made a home with someone I love, treasured countless hours with friends, started a company, released an app, built a career, learned to produce music and raised a puppy. I have also seen my company fail, felt a decline in my mental health, struggled with anxiety and feelings of inadequacy, seen loved ones battle illness and lost a dear friend. Undertaking a PhD has laid bare the best and worst aspects of myself and shown me where I need to grow. Most of all, the experience has taught me where my passion lies and that I need to chase it. I am immensely thankful for that and cannot wait for what's next.

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Thesis format

This is a thesis by compilation. The thesis consists of three published/publishable papers linked together by an introduction, literature review, interconnecting notes, discussion and conclusion. It is presented in a single manuscript and is structured so that the introduction, literature review, three papers, discussion and conclusion are separate chapters. The thesis is composed so that the three papers are distinct but connect in a logical and coherent way.

Papers & statement of contribution

This thesis includes the following papers:

	Title	Lead author	Co-author 1	Co-author 2
Paper 1	Tension between leadership archetypes: Systematic review to inform construction research and practice Published in *Journal of Management in Engineering*	Peter Graham	Assoc. Prof. Natalia Nikolova PhD Co-supervisor providing feedback	Professor Shankar Sankaran Subject matter expert providing feedback
Paper 2	Down to the wire: using teaming to balance tensions between continuity and change in projects Submitted to *Organization Studies*	Peter Graham	Professor Emmanuel Josserand PhD Supervisor providing feedback	Assoc. Prof. Natalia Nikolova PhD Co-supervisor providing feedback
Paper 3	Innovators at the edge: How dilemma & paradox mindset shape responses to barriers in the Australian Defence Force Revise and resubmit for the *Journal of Product Innovation Management Special Issue: The Human Side of Innovation Management*.	Peter Graham	Professor Emmanuel Josserand PhD Supervisor providing feedback	Assoc. Prof. Natalia Nikolova PhD Co-supervisor providing feedback

The above-stated information is correct:

Peter Graham	Professor Emmanuel Josserand	Assoc. Prof. Natalia Nikolova	Dr Marco Berti	Professor Shankar Sankaran
19/10/2020	19/10/2020	19/10/2020	19/10/2020	19/10/20

Table 1. Papers and contribution of co-authors

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Abstract

The concept of balance holds a prominent position in theories about tensions (Schad, Lewis, Raisch, & Smith, 2016). Tensions are situations involving 'stress, anxiety, discomfort, or tightness in making choices and moving forward' (Putnam, Fairhurst, & Banghart, 2016, p. 68). Through balance organizations can minimize the negative impacts of tensions while maximizing their positive impacts (Miron-Spektor, Ingram, Keller, Smith, & Lewis, 2018; Smith & Besharov, 2019). However, this emphasis on balance is not reflected in theories about how individuals manage tensions. For some individuals, tensions paralyze work, while for others, tensions propel work (Andriopoulos, Gotsi, Lewis, & Ingram, 2018). While theory emphasizes the critical role of individuals in stewarding through tensions, it struggles to explain how individuals balance the contrasting impacts of tension.

In this doctoral research, I investigate the micro-level mechanisms individuals rely on to balance tensions in projects. Projects are an ideal empirical object for unpacking how individuals balance tensions as they create temporary arenas where tensions are frequent and individuals have greater autonomy to act in novel ways. I use three studies to address this aim. Each study focusses on different tensions in different types of projects, and uses a different methodology, standing as a complete paper. Paper 1 is a systematic review of 289 peer-reviewed papers that assesses how tensions between vertical and horizontal leadership paradigms can be balanced in construction projects. Paper 2 is a longitudinal case-study of how tension between continuity and change is balanced during preparations for a city-wide event. Paper 3 is a comparative case-study of how 38 innovators balance tensions between risk and innovation in defense innovation projects. The results of the three papers are used to explore the underlying mechanisms used by individuals to balance tensions.

The theoretical significance of the research is twofold. First, the research contributes a richer understanding of how leadership, teamwork & mindsets serve as micro-level

mechanisms for balancing tensions. Second the research gives new insight into the nature of balancing tensions: that balance requires a blend of stable and dynamic states, that asymmetric tension sometimes require imbalanced responses, and that balancing tensions implicitly involves accumulating tensions. Through a dynamic view of balance, the research shows how tensions persist, become entwined and elicit situational balancing logics. The practical significance of the research rests in highlighting how individuals can balance tensions across a range of situations, a skill that is increasingly valued in organizations today.

Acronyms

ADF – Australian Defence Force

AEC – Architecture, Engineering and Construction

ARMY – Australian Army

BIM – Building Information Modelling

BREEAM – Building Research Establishment Environmental Assessment Method

DEV – Paper 2 target organization (pseudonym)

FFE – Fuzzy-front end

ICT – Information and Communications Technology

IPD – Integrated Project Delivery

IT – Information Technology

JOINT – Australian Joint Operations

LEED – Leadership in Energy and Environmental Design

NPD – New product development

OCB – Organizational Citizenship Behaviour

OHS – Occupational Health and Safety

PBO – Project-based organization

R&D – Research & Development

RAAF – Royal Australian Air Force